ER Site No. 116: Building 9990 Septic System

ADS: 1295
Operable Unit: Septic Tanks and Drainfields

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Site History

ER Site 116 includes the process waste and the septic system serving Bldg. 9990. Bldg. 9990 is located southeast of Coyote Canyon less than 1.6 km (1 mi) south of Bldg. 9820 and about 1.2 km, (0.75 mi) northwest of the Old Cable Site. The facility was constructed in 1969 and used as an explosive test facility from 1969 to 1986. Tests were conducted behind the building, and debris from the blasts, which often used depleted uranium (DU), fell out over the area.

Photographic chemicals from a former darkroom were disposed to the upstairs sink, which discharged to a seepage pit southwest of the building. Spills of polychlorinated biphenyls (PCB)-contaminated transformer oil from a bank of 72 transformers located next to unprotected floor drains were cleaned up, but some PCB-contaminated oil may have entered the floor drains. In the early 1980s, drums of methylene chloride were stored in the building near the floor drains. Leakage may have occurred to the seepage pit that received photographic wastes. In addition, small quantities of dilute copper sulfate from water resistors may have been discharged into either the seepage pit or the septic system.

The septic system for Bldg. 9990 consists of one 2,850 L (750 gal) septic tank connected to a distribution box and four seepage pits located approximately 30 m (100 ft) southwest of the building. The septic system received septage from restrooms and other drains and was last pumped in the spring of 1989. A fifth seepage pit of the same dimensions is also located southwest of the building and has received industrial wastewater from the upstairs sink in the darkroom and floor drains on the west side of the building. This pit probably received the largest volume of wastewater. Estimated effluent discharge rates from the facility range between 230 to 2,300 L/ day (60 and 600 gal/day). The industrial wastewater system and septic system have been inactive since 1989.

The site is estimated to lie approximately 30 - 45 meters (100 - 150 feet) above the regional water table, although depth-to-groundwater data is lacking for the area in which this site is located.

Constituents of Concern

The constituents of concern at the site are photo-processing chemicals (silver, cadmium, hexavalent chromium, and cyanide), methylene chloride, HE, DU, and PCBs. Aqueous samples obtained from the septic tank detected cadmium, chromium, copper, lead, manganese, silver, total phenolics, and oil and grease.

Current Hazards

No known surface or subsurface hazards have been identified, based on environmental soil and soil-gas sampling that has been conducted at the site.

Current Status of Work

The material in the septic tank was sampled for waste characterization purposes in the spring of 1994.

A passive soil gas survey conducted in the spring of 1994 showed detectable concentrations of BTEX northeast of the seepage pits. Process knowledge does not include BTEX as a potential contaminant and it is believed that the anomalies are the result of oil and gas leaks from vehicles parked on a concrete pad northeast of the site.

Soil samples were collected around the discharge points of the two systems in 1994.

Wastes in the septic tank were removed for disposal and the empty tank inspected by NMED in 1995. The tank was decontaminated, and concrete samples were collected from the tank to verify that no COCs remain. The tank was then backfilled with clean soil.

A confirmatory sampling No Further Action (NFA) proposal was submitted to the New Mexico Environmental Department/Hazardous and Radioactive Materials Bureau (NMED/HRMB) in July 1996. NMED issued a Request for Supplemental Information (RSI) in June 1998. SNL/NM responded to the RSI in November 1998. NMED issued a second RSI in June 2000 and required that additional high explosives (HE) soil samples be collected, and a monitoring well be installed at this site. SNL/NM responded to this second RSI in September 2000 and agreed to these additional requirements. A groundwater monitoring well (well CTF-MW1) was installed at a location approximately one-quarter of a mile southwest, and downstream of this site in August 2001. Also, two additional high explosives soil samples were collected at this site on Oct. 10, 2002.

Future Work Planned

Groundwater samples are being collected from well CTF-MW1 for eight quarters, or two years. These samples are being analyzed for volatile organic compounds (VOCs), high explosive (HE) compounds, metals, and cyanide. The analyical results for these groundwater and additional soil samples will be reviewed by NMED and SNL/NM personnel and the site will either be approved for NFA, or additional characterization work will be completed.

Waste Volume Estimated/Generated

A total of 4 drums of radioactive waste was generated and disposed of in FY96.

Information for ER Site 116 was last updated Jan 17, 2003.